

Application Number 10/775,884

Amendment responsive to Office Action mailed August 22, 2005

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Currently amended): A linear recording medium, for use with a recording drive designed to read pairs of non-parallel servo transitions having substantially no modulation of distance between immediately adjacent pairs of ~~non-parallel~~ servo transitions on the medium, comprising a series of pairs of parallel servo transitions, wherein for each of the pairs of ~~non-parallel~~ servo transitions there is a corresponding pair of non-parallel servo transitions, wherein the linear recording medium further comprises modulated distances between adjacent pairs of the parallel servo transitions as a function of location of the pairs of parallel servo transitions on the medium, the modulated distances being encoded to define position error signals such that the recording drive designed to expect essentially no modulated distances between adjacent parallel servo transitions on the medium will generate the position error signals.

Claim 2 (Canceled).

Claim 3 (Original): The medium of claim 1, in which the linear recording medium is a magnetic recording medium.

Claim 4 (Original): The medium of claim 1, in which the linear recording medium is a tape recording medium.

Claim 5 (Currently amended): A linear recording medium, for use with a recording drive designed to read pairs of non-parallel servo transitions having substantially no modulation of distance between immediately adjacent pairs of parallel servo transitions on the medium, comprising a series of pairs of parallel servo transitions, wherein for each of the pairs of parallel servo transitions there is a corresponding pair of non-parallel servo transitions, wherein ~~The medium of claim 1, in which the transitions of the pairs of parallel servo transitions define roughened gap edge profiles.~~

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Claim 6 (Previously Presented): The medium of claim 5, in which the roughened gap edge profiles define peak-to-peak roughening amplitude, A , equal to $\left(\frac{T_w}{2}\right) \tan \theta$, where θ is a slant angle and the profile has a cross track wavelength λ approximately equal to a servo read head track width T_w .

Claim 7 (Currently amended): A system for intentionally generating position error signal in a data recording drive designed to read pairs of non-parallel servo transitions having substantially no modulation of distance between immediately adjacent pairs of ~~non~~-parallel servo transitions, comprising in combination:

- a) a linear recording medium comprising pairs of parallel servo transitions, wherein for each of the pairs of ~~non~~-parallel servo transitions there is a corresponding pair of non-parallel servo transitions; and
- b) a servo read head connected to the drive to read at least one of the pairs of parallel servo transitions and the pairs of non-parallel servo transitions,

wherein the medium further comprises modulated distances between adjacent pairs of the parallel servo transitions as a function of location of the pairs of parallel servo transitions on the medium, the modulated distances being encoded to define position error signals such that the data recording drive designed to expect essentially no modulated distances between adjacent parallel servo transitions on the medium will generate the position error signals.

Claim 8 (Canceled).

Claim 9 (Previously Presented): The system of claim 7, in which the transitions in the pairs of parallel servo transitions define roughened gap edge profiles.

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Claim 10 (Previously Presented): The system of claim 9, in which the roughened gap edge profiles define peak-to-peak roughening amplitude, A , equal to $\left(\frac{T_w}{2}\right) \tan \theta$, where θ is a slant angle and the profile has a cross track wavelength λ approximately equal to a servo read head track width T_w .

Claim 11 (Currently amended): A method of evaluating performance of a linear recording drive designed to read pairs of ~~non~~-parallel servo transitions without modulation of distance between immediately adjacent pairs of ~~non~~-parallel servo transitions on a linear recording medium compatible with the drive, comprising:

- a) providing a linear recording medium, upon at least a portion of which are:
 - (i) first pairs of ~~non~~-parallel servo transitions; and
 - (ii) for each of the first pairs of ~~non~~-parallel servo transitions, corresponding second pairs of non-parallel servo transitions; and
- b) using the drive to read a position error signal from the second ~~first~~ pairs of non-parallel servo transitions at each transverse location on the medium;
- c) comparing the position error signal to an expected value;
- d) using the drive to read system noise from the first ~~second~~ pairs of parallel servo transitions; and
- e) comparing the system noise to an expected value,

wherein the transitions in the first pairs of parallel servo transitions define roughened gap edge profiles.

Claim 12 (Canceled).

Claim 13 (Previously Presented): The method of claim ~~11, 12~~, in which the roughened gap edge profiles define peak-to-peak roughening amplitude, A , equal to $\left(\frac{T_w}{2}\right) \tan \theta$, where θ is a slant angle and the profile has a cross track wavelength λ approximately equal to a servo read head track width T_w .